FIG. 1

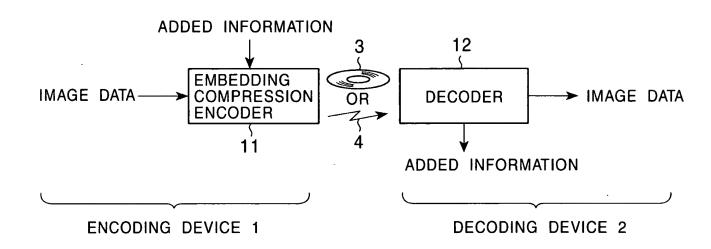


FIG. 2

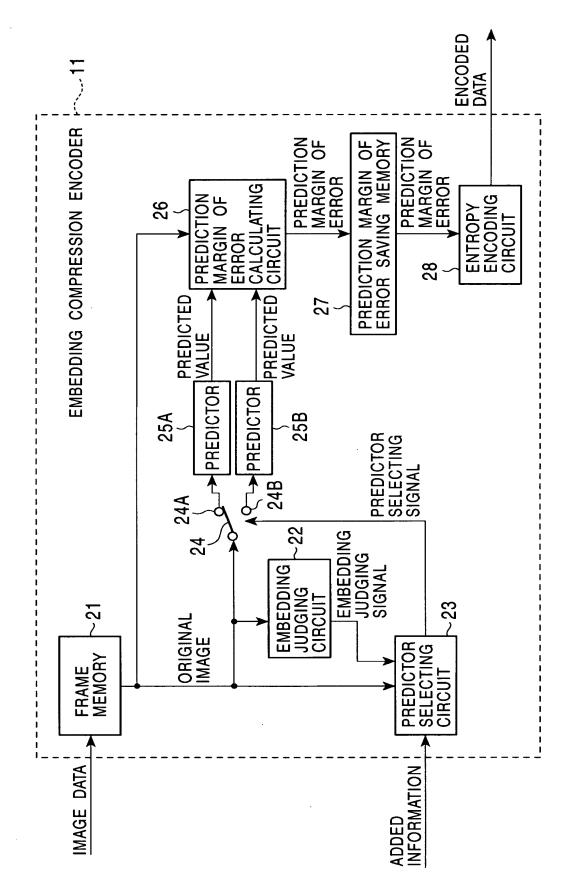


FIG. 3

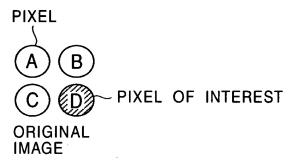


FIG. 4A

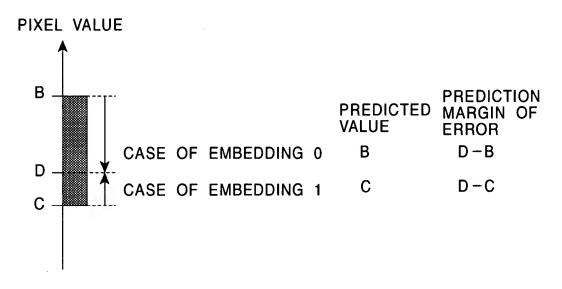


FIG. 4B

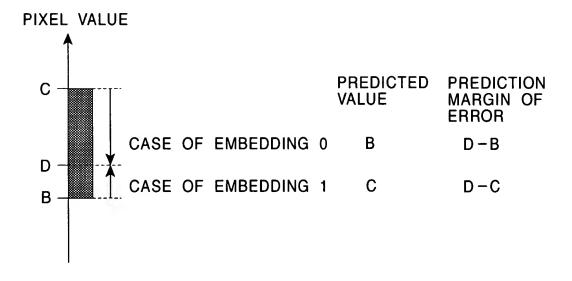


FIG. 5A

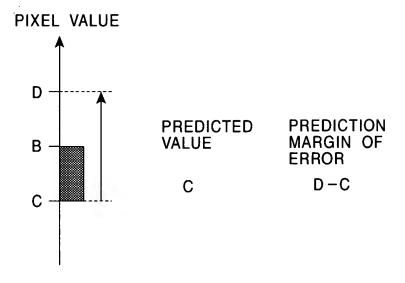


FIG. 5B

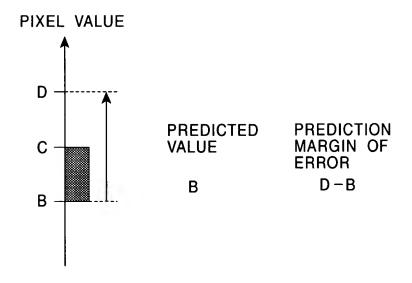


FIG. 6

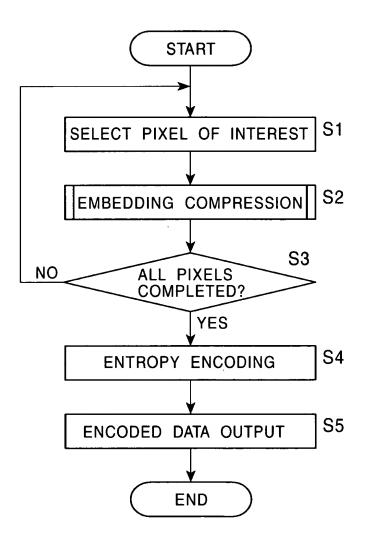
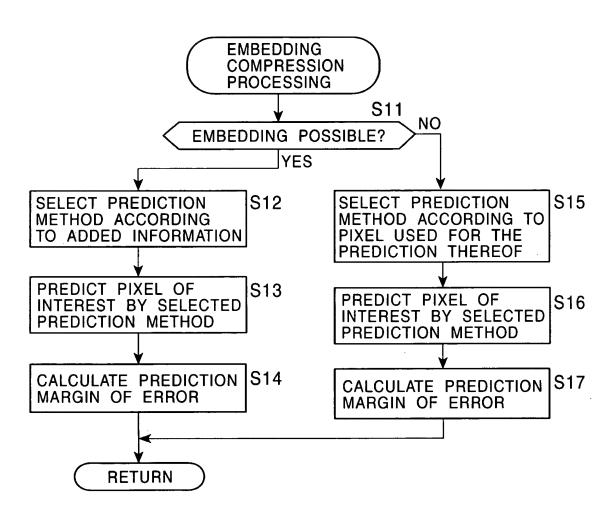


FIG. 7



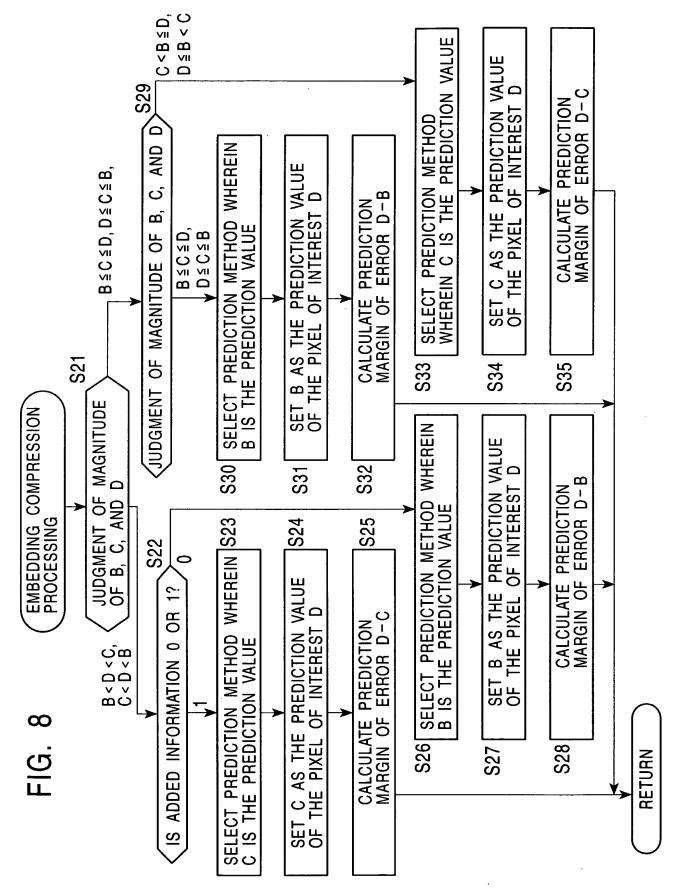


FIG. 9

RELATION OF B, C, AND D		EMBEDDING JUDGMENT	ADDED INFORMATION	PREDICTION VALUE	PREDICTION MARGIN OF ERROR
	B < D < C	V/50	0	В	D – B
	OR C < D < B	YES	1	С	D - C
B≠C	B < C ≦ D OR D ≦ C < B	NO		В	D – B
	C < B ≤ D OR D ≤ B < C	NO		С	D - C
B = C		NO	—	В	D - B

FIG. 10

RELATION OF A, B, C, AND D		EMBEDDING JUDGMENT	ADDED INFORMATION	PREDICTION VALUE	PREDICTION MARGIN OF ERROR
B≠C	B < D < C OR	YES	0	В	D – B
	C < D < B		1	С	D - C
	B < C ≦ D OR D ≦ C < B	NO	_	В	D - B
	C < B ≦ D OR D ≦ B < C	NO	· ·	С	D - C
A ≠ B = C	A < D < B OR	YES	0	Α	D - A
	B < D < A		1	В	D - B
	A < B ≦ D OR D ≦ B < A	NO		А	D – A
	B < A ≦ D OR D ≦ A < D	NO		В	D - B
A = B = C		NO		А	D - A

FIG. 11

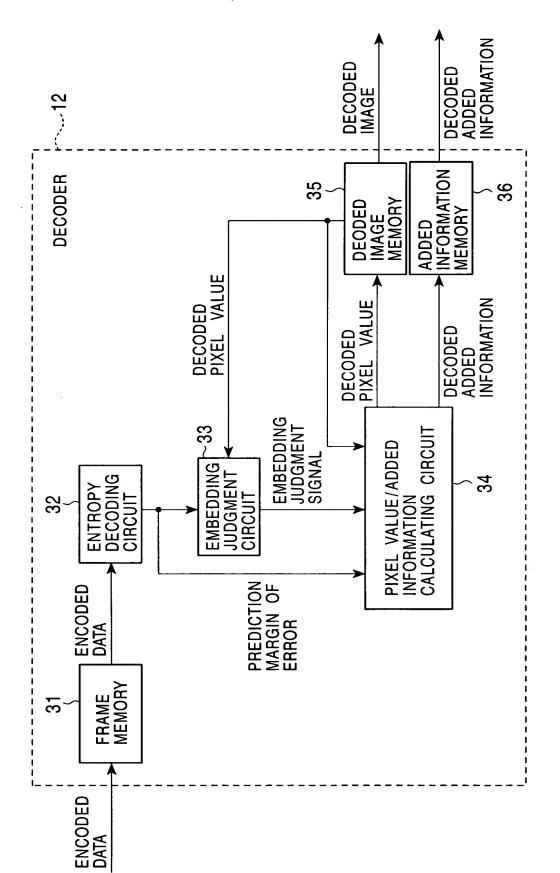


FIG. 12

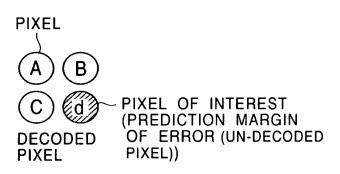
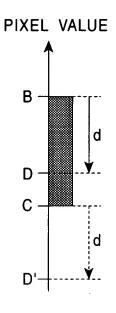
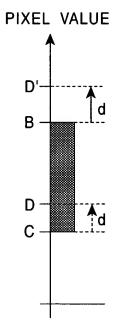


FIG. 13A



PREDICTION METHOD
WHEREIN B IS SET AS → 0 IS EMBEDDED
THE PREDICTION VALUE

FIG. 13B



PREDICTION METHOD
WHEREIN C IS SET AS
→ 1 IS EMBEDDED
THE PREDICTION VALUE

FIG. 14

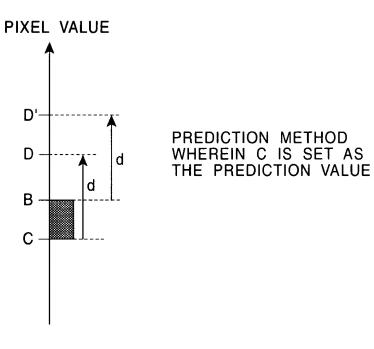


FIG. 15

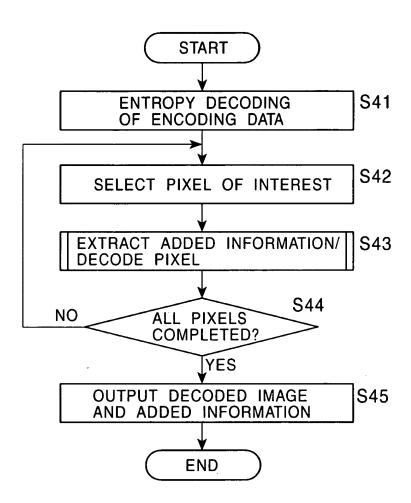
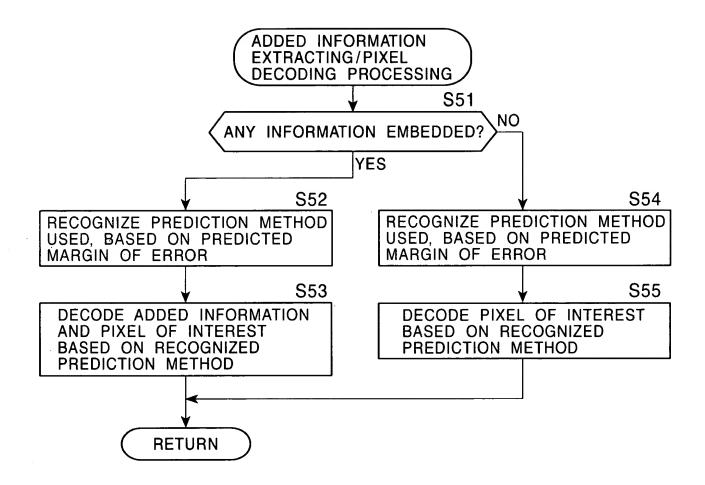


FIG. 16



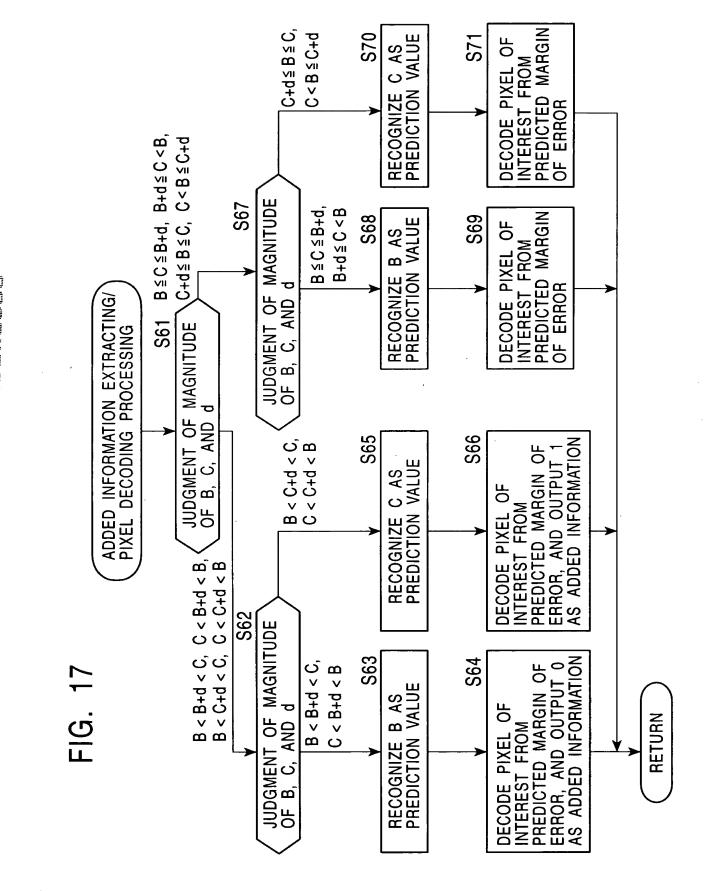


FIG. 18

RELATION AND d	I OF B, C,	JUDGMENT RESULTS OF EMBEDDED INFORMATION	ADDED INFORMATION	DECODED VALUE
B≠C	B < B+d < C OR C < B+d < B	YES	0	B+d
	B < C+d < C OR C < C+d < B	YES	1	C+d
	B < C ≦ B+d OR B+d ≦ C < B	NO		B+d
	C+d ≦ B < C OR C < B ≦ C+d	NO		C+d
B = C		NO		B+d

FIG. 19

RELATION OF A, B, C, AND d		JUDGMENT RESULTS OF EMBEDDED INFORMATION	ADDED INFORMATION	DECODED VALUE
·	B < B+d < C OR C < B+d < B	YES	0	B+d
B≠C	B < C+d < C OR C < C+d < B	YES	1	C+d
	B < C ≦ B+d OR B+d ≦ C < B	NO		B+d
	C+d ≦ B < C OR C < B ≦ C+d	NO		C+d
A ≠ B = C	A < A+d < B OR B < A+d < A	YES	0	A+d
	A < B+d < B OR B < B+d < A	YES	1	B+d
	A < B ≦ A+d OR A+d ≦ B < A	NO		A+d
	B+d ≦ A < B OR B < A ≦ B+d	NO		B+d
A = B = C		NO		A+d

FIG. 20

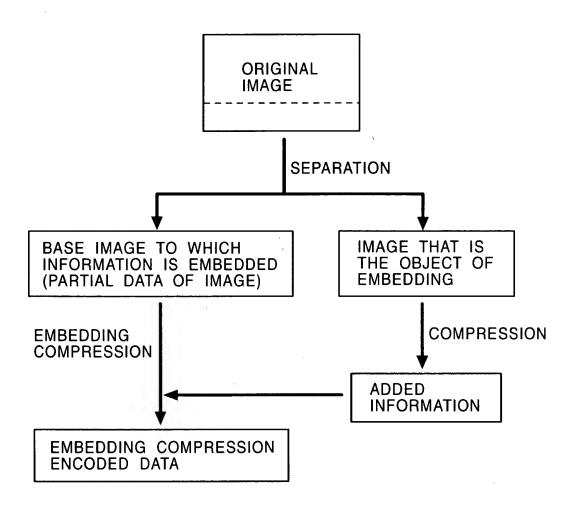


FIG. 21

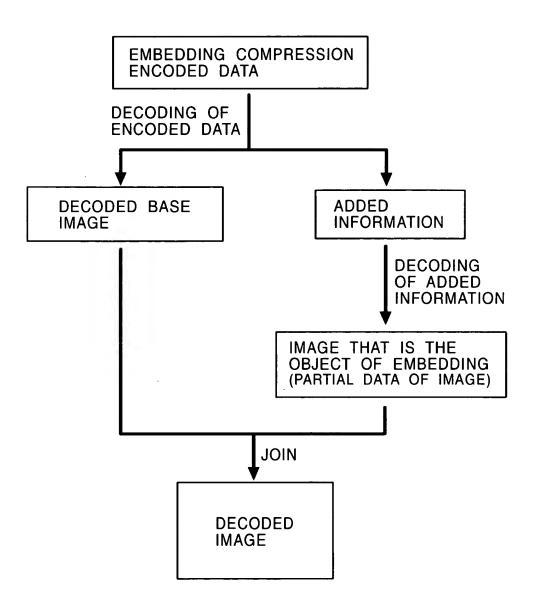


FIG. 22

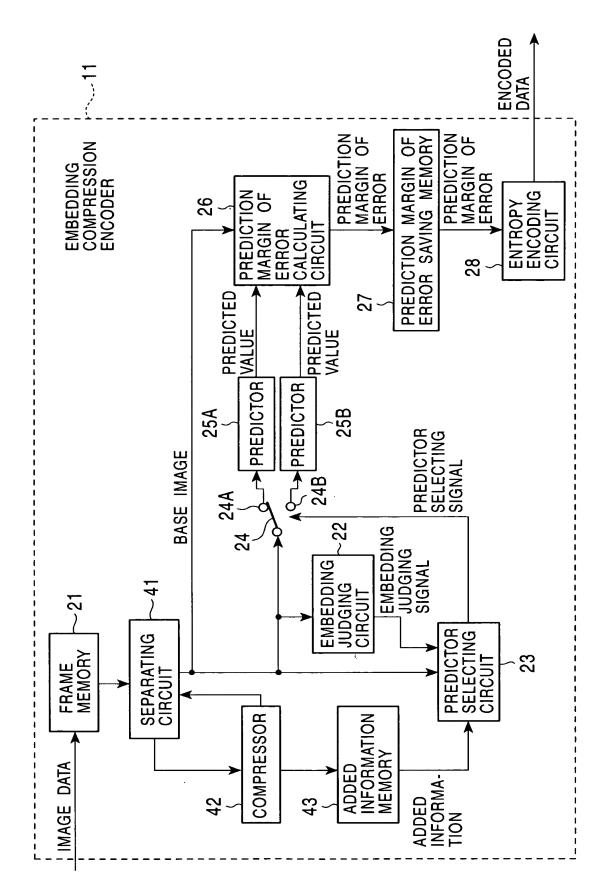


FIG. 23

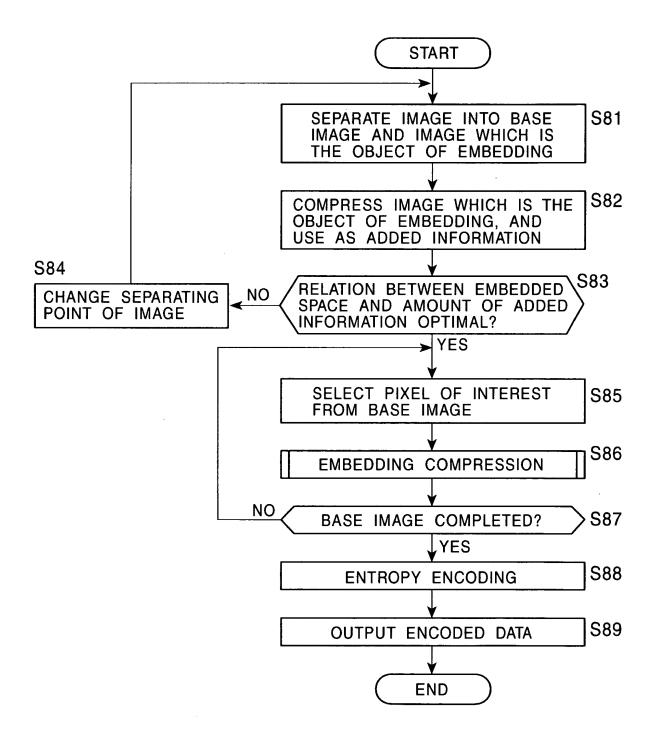
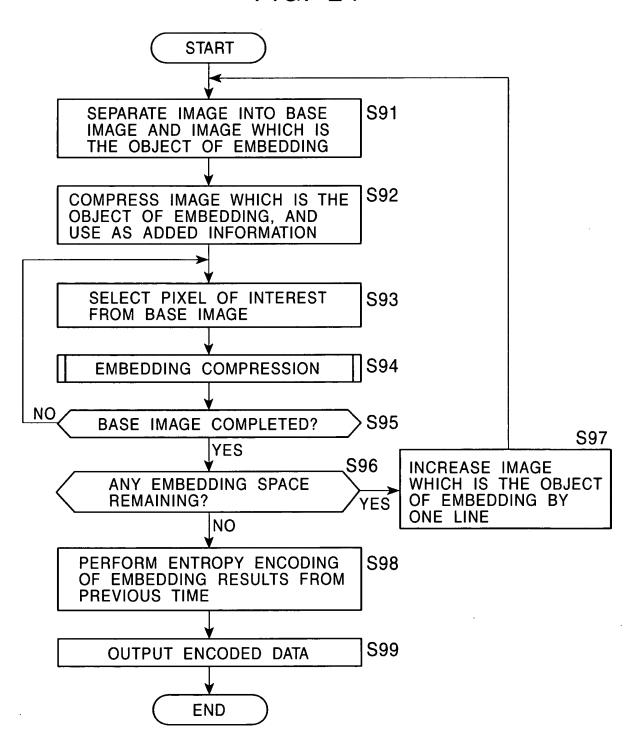


FIG. 24



DECODED IMAGE ~ 12 EXPANDER JOINING DEVICE DECODER 52 51 ADDED INFORMATION MEMORY 35 36 DECODED IMAGE MEMORY DECODED PIXEL VALUE DECODED PIXEL VALUE ADDED INFORMATION EMBEDDING JUDGMENT SIGNAL **№33** PIXEL VALUE/ADDED INFORMATION CALCULATING CIRCUIT EMBEDDING JUDGING CIRCUIT ENTROPY DECODING CIRCUIT ENCODED DATA DECODING PREDICTED MARGIN OF ERROR DATA FRAME MEMORY 31 34~ ENCODED DATA

25 / 27

FIG. 25

FIG. 26

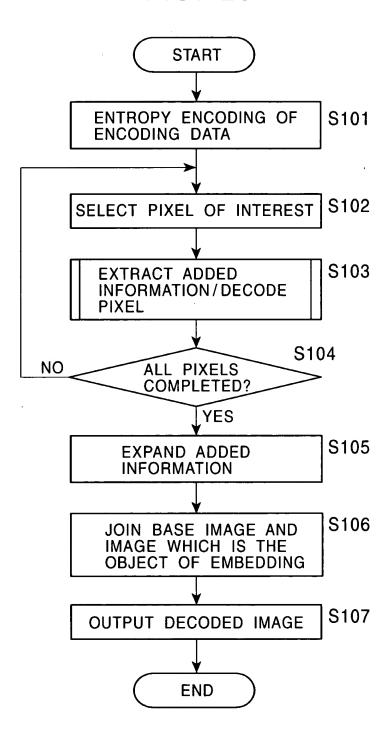


FIG. 27

COMPRESSING METHOD	IMAGE #1	IMAGE #2
PRESENT METHOD	0.681	0.519
CONVENTIONAL PREDICTION ENCODING	0.691	0.539

FIG. 28

